AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

What is claimed is:

1.-39. (Cancelled)

40. (Previously Presented) A method of dynamically determining the optimum part of an available bandwidth for use by a plurality of units in a communications system, without taking new carrier measurements each instance when a carrier's performance becomes poor, comprising:

measuring a quality of each of the plurality of carriers; and

ranking the plurality of carriers according to the measured quality, wherein a list of candidate carriers is created in accordance with the ranking of the plurality of carriers;

maintaining the list of candidate carriers to enable a dynamic carrier selection (DCS) algorithm that takes into account multi-path fading conditions in the propagation;

updating the list of candidate carriers periodically in order to adequately reflect which part of the available bandwidth should be used; and

initiating carrier re-selection from a poor carrier to a better carrier from the list of candidate carriers.

41. (Previously Presented) The method of claim 40, wherein the step of measuring occurs in a frequency-hopping mode and the list of candidate carriers is used in a high-speed mode.

42. (Previously Presented) The method of claim 41, wherein the high-speed mode is an extension mode of a frequency hopping technology system that is entered into for a limited time when a higher data rate is desired.

43. (Previously Presented) The method of claim 41, wherein the step of determining which carrier to operate on is made in connection with the high-speed mode.

44. (Previously Presented) The method of claim 43, wherein a first part of the measurement algorithm is performed when the system is operating in the frequency-hopping mode.

45. (Previously Presented) The method of claim 41, further comprising the step for using reserved recovery slots in combination with the high-speed link.

46. (Previously Presented) The method of claim 41, wherein the frequency hopping technology system is Bluetooth.

47. (Previously Presented) The method of claim 41, wherein if a unit is only involved in high speed traffic during a certain period of time, it remains synchronized to the frequency-hopping carrier.

48. (Previously Presented) The method of claim 47, further comprising the step of maintaining synchronization by a unit by listening to beacons that are part of the frequency hopping system.

49. (Previously Presented) The method of claim 40, further comprising the step of creating list of candidate carriers based on measurements taken by a master unit having at least one slave unit.

50. (Previously Presented) The method of claim 40, further comprising the steps of:

creating the list of candidate carriers by a master unit based on measurements taken by two or more slave units; and

communicating by the master unit to the slave units a change to a high-speed mode.

51. (Previously Presented) The method of claim 50, wherein at least one of the units in a high-speed mode also takes part in a frequency hopping link by means of a time division based communication between the high speed mode and the frequency hopping mode.

52. (Previously Presented) The method of claim 51, wherein carrier measurements are taken by the slave units while they are in the frequency hopping mode, and the list of candidate carriers used in the high-speed mode is then appropriately updated.

53. (Previously Presented) The method of claim 52, wherein, once carrier measurements are taken and processed by the master unit, the candidate list is created or updated and transferred to the slave units.

54. (Previously Presented) The method of claim 53, wherein, in addition to the candidate carriers, the list of candidate carriers also reveals which of these frequencies are in use by units operating in the high-speed mode.

55. (Previously Presented) The method of claim 54, wherein the new high-speed carrier is always established in cooperation with the master unit, is indicated as being in use in the list of candidate carriers and is distributed to the slave units.

56. (Previously Presented) The method of claim 49, further comprising the step of initiating carrier re-selection in a controlled method by the master unit.

57. (Previously Presented) The method of claim 49, further comprising the steps of requesting, by the at least one slave unit, a new high-speed carrier, either over the current high-speed carrier if the master unit participates on the carrier and the high-

speed carrier can still be used for communications, or over the frequency hopping carrier if the master unit is not able to participate on the high-speed carrier.

58. (Previously Presented) The method of claim 57, further comprising the steps of:

redirecting, by the master unit, at least one of the slave units to a new high-speed carrier;

updating, by the master unit, the list of candidate carriers; and

distributing, by the master unit, the updated list of candidate carriers to the at least one slave units.

59. (Previously Presented) The method of claim 58, further comprising the step of updating the at least one slave units over a frequency hopping-link via a beacon carrier for high speed slave units that do not have a high-speed connection to the master unit.

60. (Previously Presented) The method of claim 49, further comprising the step of initiating carrier re-selection in an uncontrolled way without the influence of a master unit.

61. (Previously Presented) A master unit having a dynamic carrier-selection (DCS) system adapted to determine the optimum part of an available bandwidth for use in a communications system, comprising:

a measuring means adapted to measure a quality of each of the plurality of carriers;

a ranking means adapted to rank the plurality of carriers according to the measured quality, wherein a list of candidate carriers is created in accordance with the ranking of the plurality of carriers;

a maintenance means adapted to maintain the list of candidate carriers to enable a DCS algorithm that takes into account multi-path fading conditions in the propagation;

an updating means adapted to update the list of candidate carriers periodically in order to adequately reflect which part of the available bandwidth should be used; and

an initiating means adapted to cause carrier re-selection from a poor carrier to a better carrier from the list of candidate carriers.

62. (Previously Presented) The master unit of claim 61, wherein the measuring means is adapted to measure the quality of each of the plurality of carriers in a frequency-hopping mode and use the list of candidate carriers in a high-speed mode.

63. (Previously Presented) The master unit of claim 62, wherein the high-speed mode is an extension mode of a frequency hopping technology system that is entered into for a limited time when a higher data rate is desired.

64. (Previously Presented) The master unit of claim 62, wherein the measuring means adapted to determine which carrier to operate on uses a high-speed mode.

65. (Previously Presented) The master unit of claim 64, wherein the measuring means of the unit is adapted to perform a first part of the measurement algorithm when the communications system is operating in the frequency-hopping mode.

66. (Previously Presented) The master unit of claim 62, wherein the measuring means uses reserved recovery slots in combination with the high-speed mode.

67. (Previously Presented) The master unit of claim 62, wherein the frequency hopping technology system is Bluetooth.

68. (Previously Presented) The master unit of claim 62, wherein if it is only involved in high speed traffic during a certain period of time, it remains synchronized to the frequency-hopping carrier.

69. (Previously Presented) The master unit of claim 68, further comprising a synchronization means adapted to maintain synchronization by listening to beacons that are part of the frequency hopping system.

70. (Previously Presented) The master unit of claim 61, in combination with at least one slave unit.

71. (Previously Presented) The master unit of claim 61, further comprising two or more slave units, wherein the master unit is adapted to create the list of candidate carriers based on measurements taken by the two or more slave units; and the master unit is adapted to communicate to the slave units a change to a high-speed mode.

72. (Previously Presented) The master unit of claim 71, wherein at least one of the master unit or slave units in a high-speed mode also takes part in a frequency hopping link by means of a time division communication between the high speed mode and the frequency hopping mode.

73. (Previously Presented) The master unit of claim 72, wherein carrier measurements are taken by the master unit or slave units while they are in the frequency hopping mode, and the list of candidate carriers used in the high-speed mode is then appropriately updated.

74. (Previously Presented) The master unit of claim 73, wherein, once carrier measurements are taken and processed by the master unit, the candidate list is created or updated and transferred to the slave units.

75. (Previously Presented) The master unit of claim 74, wherein, in addition to the candidate carriers, the list of candidate carriers also reveals which of these frequencies are in use by the master unit or slave units operating in the high-speed mode.

76. (Previously Presented) The master unit of claim 75, wherein the new high-speed carrier established in cooperation with the master unit, is indicated as being in use in the list of candidate carriers and is distributed to the slave units.

77. (Previously Presented) The master unit of claim 70, adapted to initiate carrier re-selection in a controlled method.

78. (Previously Presented) The master unit of claim 70, wherein the at least one slave unit is adapted to request a new high-speed carrier, either over the current high-speed carrier if the master unit participates on the carrier and the high-speed carrier can still be used for communications, or over the frequency hopping carrier if the master unit is not able to participate on the high-speed carrier.

79. (Previously Presented) The master unit of claim 78, adapted to redirect at least one of the slave units to a new high-speed carrier, update the list of candidate carriers, and distribute the updated list of candidate carriers to the at least one slave units.

80. (Previously Presented) The master unit of claim 79, adapted to update the at least one slave unit over a frequency hopping-link via a beacon carrier for high speed slave units that do not have a high-speed connection to the master unit.

81. (Previously Presented) The master unit of claim 70, wherein the at least one slave unit is adapted to initiate carrier re-selection in an uncontrolled way without the influence of a master unit.

82. (Previously Presented) A slave unit in a dynamic carrier-selection system (DCS) for determining the optimum part of an available bandwidth for use in a communications system, without taking new carrier measurements each instance when a carrier's performance becomes poor, the slave unit comprising:

a measuring means adapted to measure a quality of each of the plurality of carriers; and

a transmission means adapted to transmit the measure of quality to a master unit, said master unit having a ranking means adapted to rank the plurality of carriers according to the measured quality, wherein a list of candidate carriers is created in accordance with the ranking of the plurality of carriers.

83. (Previously Presented) The slave unit of claim 82, wherein the master unit is adapted to maintain the list of candidate carriers to enable a DCS algorithm that takes into account multi-path fading conditions in the propagation, update the list of candidate carriers periodically in order to adequately reflect which part of the available bandwidth should be used, and cause carrier re-selection from a poor carrier to a better carrier from the list of candidate carriers.

84. (Previously Presented) The slave unit of claim 82, wherein the measuring means is adapted to measure the quality of each of the plurality of carriers in a frequency-hopping mode and use the list of candidate carriers in a high-speed mode.

85. (Previously Presented) The slave unit of claim 84, wherein the high-speed mode is an extension mode of a frequency hopping technology system that is entered into for a limited time when a higher data rate is desired.

86. (Previously Presented) The slave unit of claim 84, wherein the measuring means adapted to determine which carrier to operate on uses a high-speed mode.

87. (Previously Presented) The slave unit of claim 86, wherein the measuring means of the unit is adapted to perform a first part of the measurement algorithm when the system is operating in the frequency-hopping mode.

88. (Previously Presented) The slave unit of claim 84, wherein the measuring means uses reserved recovery slots in combination with the high-speed mode.

89. (Previously Presented) The slave unit of claim 84, wherein the frequency hopping technology system is Bluetooth.

90. (Previously Presented) The slave unit of claim 84, wherein if the slave unit is only involved in high speed traffic during a certain period of time, it remains synchronized to the frequency-hopping carrier.

91. (Previously Presented) The slave unit of claim 90, further comprising a synchronization means adapted to maintain synchronization by the slave unit in the system by listening to beacons that are part of the frequency hopping system.

92. (Previously Presented) The slave unit of claim 82, in combination with a master unit adapted to create the list of candidate carriers.

93. (Previously Presented) The slave unit of claim 92, wherein the master unit is adapted to create the list of candidate carriers based on measurements taken by the two or more slave units; and the master unit is adapted to communicate to the slave units a change to a high-speed mode.

94. (Previously Presented) The slave unit of claim 93, wherein the slave unit in a high-speed mode also takes part in a frequency hopping link by means of a time division communication between the high speed mode and the frequency hopping mode.

95. (Previously Presented) The slave unit of claim 94, wherein carrier measurements are taken by the slave unit while it is in the frequency hopping mode, and the list of candidate carriers used in the high-speed mode is then appropriately updated.

96. (Previously Presented) The slave unit of claim 95, wherein, once carrier measurements are taken and processed by the master unit, the candidate list is created or updated and transferred to the slave units.

97. (Previously Presented) The slave unit of claim 96, wherein, in addition to the candidate carriers, the list of candidate carriers also reveals which of these frequencies are in use by units operating in the high-speed mode.

98. (Previously Presented) The slave unit of claim 97, wherein the new high-speed carrier is established in cooperation with the master unit, is indicated as being in use in the list of candidate carriers and is distributed to the slave units.

99. (Previously Presented) The slave unit of claim 92, wherein the master unit is adapted to initiate carrier re-selection in a controlled method.

100. (Previously Presented) The slave unit of claim 92, wherein the slave unit is adapted to request a new high-speed carrier, either over the current high-speed carrier if the master unit participates on the carrier and the high-speed carrier can still be used for communications, or over the frequency hopping carrier if the master unit is not able to participate on the high-speed carrier.

101. (Previously Presented) The slave unit of claim 100, wherein the master unit is adapted to redirect at least one of the slave units to a new high-speed carrier, update the list of candidate carriers; and distribute the updated list of candidate carriers to the at least one slave units.

102. (Previously Presented) The slave unit of claim 101, wherein the master unit is adapted to update the at least one slave units over a frequency hopping-link via a beacon carrier for high speed slave units that do not have a high-speed connection to the master unit.

103. (Previously Presented) The slave unit of claim 92, adapted to initiate carrier re-selection in an uncontrolled way without the influence of a master unit.

104. (Previously Presented) A dynamic carrier-selection (DCS) system of a master unit and at least one slave unit, adapted to determine the optimum part of an available bandwidth for use in a communications system, without taking new carrier measurements each instance when a carrier's performance becomes poor, the system comprising:

a measuring means in a unit of the system adapted to measure a quality of each of the plurality of carriers;

a ranking means in a unit of the system adapted to rank the plurality of carriers according to the measured quality, wherein a list of candidate carriers is created in accordance with the ranking of the plurality of carriers;

a maintenance means in a unit of the system adapted to maintain the list of candidate carriers to enable a DCS algorithm that takes into account multi-path fading conditions in the propagation;

an updating means in a unit in the system adapted to update the list of candidate carriers periodically in order to adequately reflect which part of the available bandwidth should be used; and

an initiating means in a unit in the system adapted to cause carrier re-selection from a poor carrier to a better carrier from the list of candidate carriers.

105. (Previously Presented) The system of claim 104, wherein the measuring means is adapted to measure the quality of each of the plurality of carriers in a frequency-hopping mode and use the list of candidate carriers in a high-speed mode.

106. (Previously Presented) The system of claim 105, wherein the high-speed mode is an extension mode of a frequency hopping technology system that is entered into for a limited time when a higher data rate is desired.

107. (Previously Presented) The system of claim 105, wherein the measuring means adapted to determine which carrier to operate on uses a high-speed mode.

108. (Previously Presented) The system of claim 107, wherein the measuring means of the unit is adapted to perform a first part of the measurement algorithm when the system is operating in the frequency-hopping mode.

109. (Previously Presented) The system of claim 105, wherein the measuring means uses reserved recovery slots in combination with the high-speed mode.

110. (Previously Presented) The system of claim 105, wherein the frequency hopping technology system is Bluetooth.

111. (Previously Presented) The system of claim 105, wherein if a unit is only involved in high speed traffic during a certain period of time, it remains synchronized to the frequency-hopping carrier.

112. (Previously Presented) The system of claim 111, further comprising a synchronization means adapted to maintain synchronization by a unit in the system by listening to beacons that are part of the frequency hopping system.

113. (Previously Presented) The system of claim 104, wherein the system further comprises a master unit adapted to create the list of candidate carriers and at least one slave unit.